

# **[ SYSTEM AND METHOD FOR DESIGN, DEVELOPMENT, AND DEPLOYMENT OF DISTRIBUTED APPLICATIONS THAT SHARE DATA FROM HETEROGENEOUS AND AUTONOMOUS SOURCES OVER THE WEB ]**

## **Abstract of Disclosure**

This invention is related to a method for design and implementation of wide-area data sharing applications in the Internet and World Wide Web environment. The kernel of the invention is a middle tier that facilitates data integration over the Web. For each specific data sharing application, the middle tier is composed of an XML-based standard and an in-memory data structure. While the XML-based standard defines the syntax and semantics for the data to be shared and integrated, the in-memory data structure accommodates the data elements in a source-independent, relational format for manipulation in disconnected mode. The equivalency between the XML-based standard and the in-memory lays a solid basis for data integration over the Web. Data exchange in this distributed environment is realized by using Web services. Furthermore, the XML-based standard and in-memory data structure may also be extended to support distributed query processing and distributed transaction management in this environment.

## Figures